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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
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09/574,277 05/19/00 MULLER

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EXAMINER

MMC2/0131

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HARVEY J
ART UNIT PAPER NUMBER

2833
DATE MAILED:

01/31/01

Please find below and/or attached an Office communication concerning this application or proceeding.

Commissioner of Patents and Trademarks

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Office Action Summary

Application No.

09/574,277

Applicant(s)

MULLER, KLAUS

Examiner

James R. Harvey

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 19 May 2000.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 May 2000 is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. & 119(e).

Attachment(s)

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 4.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

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DETAILED ACTION

Specification

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

OK The following title is suggested: Electrical Connector with Pressure Spring and Lever.

Drawings

- OK 2. The drawings are objected to because on sheet 4 figures a-d should be labeled 5a-5d. Correction is required.

- OK 3. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: On page 6, line 5 the plug insertion two guide walls is referred to as number 54, but labeled as 64 on figure 3a. Correction is required.

Claim Objections

4. Claims 1-9 are objected to because of the following informalities:
 - a. The claims are objected to because they have reference numbers. The reference numbers in the claims are not given any patentable weight and should be removed.
 - b. In reference to claim 1 and 3-9, the periods at the end of the claims are missing.
 - OK c. In reference to claim 2, it appears molded is spelled incorrectly on line 2.
 - d. In further reference to claim 2, it appears that "the" on line 1, should follow -that-.
 - e. In reference to claim 7, it appears "circlip" on line 3, should be -circular clip-.
 - f. Throughout the claim, characterized is spelled with a "s" but should have a -z- instead.

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- g. Correction of the above is required.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-9 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

- a. In reference to claim 1, the claim recites the limitation "the housing " in line 4.
- b. In reference to claim 7, the claim recites the limitation "the stop element " in line 1.
- c. In reference to claim 9, the claim recites the limitations "the collar " and "the spring tongues" in line 2.
- d. There is insufficient antecedent basis for the above limitations in the claims.

Claim Rejections - 35 USC § 102

7. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

8. Claims 1, 6, and 7 are rejected under 35 U.S.C. 102(b) as being anticipated by Shuey et al. (4,477,022).
- a. In reference to claim 1, Shuey shows an electrical plug connectors with a cylindrical plug (38), a counter-plug (98) which is complementary to plug (38), a bayonet ring (82) which is

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rotatable about the housing (64; column 3, lines 22-25) of the counter-plug (98) for locking the plug (38) into the counter-plug (98), characterized by the fact that the bayonet ring (82) for the locking of the plug connector in the direction of plug insertion can be pushed onto the housing (16) of the plug (38) until at least one locking device of the bayonet ring (82) interlocks with the plug housing (16) and that the bayonet ring (82) for the unlocking of the plug connector can be rotated about the counter-plug housing (64).

b. In reference to claim 6, Shuey shows a collar (54) which can be pushed forwards or backwards in the direction of plug insertion and is arranged about the plug housing (16).

c. In reference to claim 7, Shuey shows the stop element is a circular clip (48) which can be fixed to the circumference of the plug housing (16).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 2 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shuey et al. (4,477,022), in view of Loveland (3,173,473).

a. In reference to claim 2, Shuey shows substantially all the elements of the claim.

However, Shuey does not show that the locking device has at least one spring tongue molded on the bayonet ring and running in the direction of the plug insertion with an inward-pointing peg and that the circumference of the plug housing has at least one sliding channel which is able to receive the peg.

Loveland shows that the locking device has at least one spring tongue 23 molded on the bayonet ring (18) and running in the direction of the plug insertion with an inward-pointing peg (22c) and that the circumference of the plug housing (figure 4) has at least one sliding channel (the threads are seen to be a sliding channel) which is able to receive the peg (22c) to provide for easier and better servicing (column 1, line 19).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the bayonet ring of Loveland in place of the bayonet ring of Shuey because Loveland's bayonet allows for easier and better servicing of the assembly.

b. In reference to claim 9, Shuey shows substantially all the elements of the claim. However, Shuey does not show that after the complete insertion of the bayonet ring (2), the collar (27) rests on the spring tongues (5,6 and 7).

Loveland shows that after the complete insertion of the bayonet ring (18), the collar (14) rests on the spring tongues (23).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the bayonet ring of Loveland in place of the bayonet ring of Shuey because Loveland's bayonet allows for easier and better servicing of the assembly.

11. Claims 4 and 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shuey et al. (4,477,022), in view of Clark et al. (5,913,691).

a. In reference to claim 4, Shuey shows substantially all the elements of the claim. However, Shuey does not show that the bayonet ring has at least one outward-pointing pin and that the plug housing has at least one lever arm which can be rotated vertically to the direction of plug to grip the pin.

Clark shows an outward-pointing pin (35) and that the plug housing has at least one lever arm (44) which can be rotated vertically to the direction of plug to grip the pin (35).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the pin and lever arrangement of Clark to improve Shuey's connector arrangement because the lever and pin arrangement requires less physical or mechanical energy (strength) to clamp the connectors together.

b. In reference to claim 5, Shuey shows substantially all the elements of the claim. However, Shuey does not show the bayonet ring has two diametrically opposite pins and that the plug housing has two diametrically opposite L-shaped lever arms which are linked together by a substantively semi-cylindrical C-strap.

Clark shows the connector arrangement has two diametrically opposite pins (35; figure 4) and that the plug housing has two diametrically opposite L-shaped lever arms (44) which are linked together by a strap 47.

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the pin and lever arrangement of Clark to improve Shuey's connector arrangement because the lever and pin arrangement requires less physical or mechanical energy (strength) to clamp the connectors together.

c. However, neither Clark or Shuey show a semi-cylindrical C-strap. It would have been obvious matter of design choice to have the strap in a semi-cylindrical shape, since such a modification would have involved a mere change in the shape of a component. A change in shape is generally recognized as being within the level of ordinary skill in the art. *In re Daily*, 149 USPQ 47 (CCPA 1976).

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12. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shuey et al. (4,477,022), in view of Knapp (4,279,458).

a. In reference to claim 8, Shuey shows substantially all the elements of the claim. However, Shuey does not show a pressure spring rests against a first stop of the collar and against a second stop of the circular clip, so that in the case of an incomplete insertion of the bayonet ring, the latter is pushed back through the front face of the collar.

Knapp shows a pressure spring (68; figure 1) rests against a first stop (74; figure 1) of the collar (28) and against a second stop (76) of the circular clip (78), so that in the case of an incomplete insertion of the bayonet ring (22), the latter is pushed back through the front face (86) of the collar (28).

It would have been obvious to one having ordinary skill in the art at the time the invention was made to use the spring arrangement of Knapp to improve the connector arrangement of Shuey because as Knapp teaches on column 2, line 55, the connector bodies are retained in engagement by use of the anti-vibration springs.

Allowable Subject Matter

13. Claim 3 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, second paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

14. The following is a statement of reasons for the indication of allowable subject matter: The claim as a whole including the limitation of the sliding channel having three elements. A starting area that runs at an angle with respect to the insertion direction, an ending area that runs parallel with the insertion direction, and both the starting and ending areas open on the front face

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of the plug housing as claimed is not taught in the prior art nor is it obvious to combine with the prior art.

Conclusion

15. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Nicolaisen, Hollands, Buckley et al., Duclos et al., and Clark et al.(5,823,808) show the state of the art with respect to applicants invention as claimed.

16. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James R. Harvey whose telephone number is 703-305-0958. The examiner can normally be reached on 8:00 A.M. To 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paula A. Bradley can be reached on 703-308-2319. The fax phone numbers for the organization where this application or proceeding is assigned are 703-305-7724 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0952.

James R. Harvey, Examiner

jrh
January 25, 2001

P. Bradley